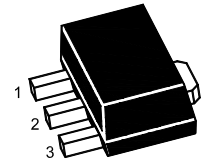


# 2SA1664U

## PNP Epitaxial Planar Transistor

High Current Application

The transistor is subdivided into two groups, O and Y, according to its DC current gain.



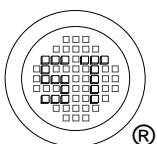
1.Base 2.Collector 3.Emitter  
SOT-89 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| Parameter                   | Symbol     | Value       | Unit             |
|-----------------------------|------------|-------------|------------------|
| Collector Base Voltage      | $-V_{CBO}$ | 35          | V                |
| Collector Emitter Voltage   | $-V_{CEO}$ | 30          | V                |
| Emitter Base Voltage        | $-V_{EBO}$ | 5           | V                |
| Collector Current           | $-I_C$     | 800         | mA               |
| Base Current                | $-I_B$     | 160         | mA               |
| Collector Power Dissipation | $P_{tot}$  | 500         | mW               |
| Junction Temperature        | $T_j$      | 150         | $^\circ\text{C}$ |
| Storage Temperature Range   | $T_{Stg}$  | -55 to +150 | $^\circ\text{C}$ |

### Characteristics at $T_{amb} = 25^\circ\text{C}$

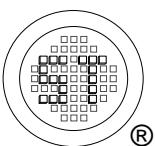
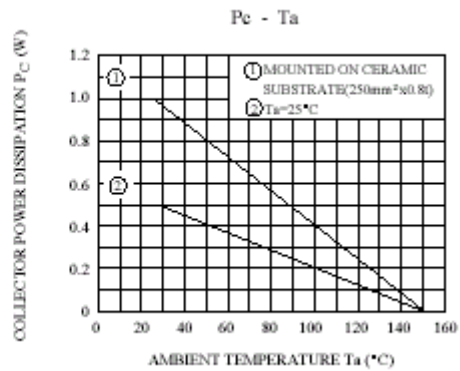
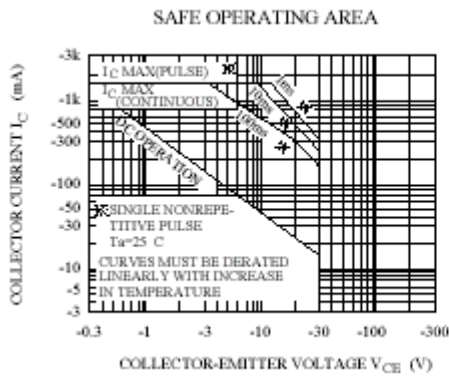
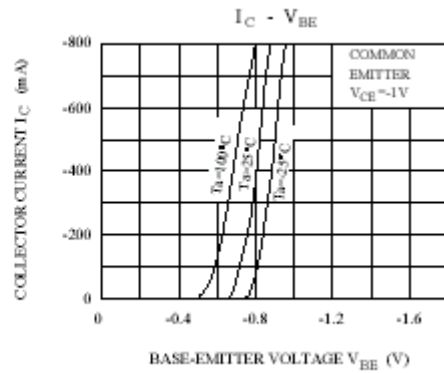
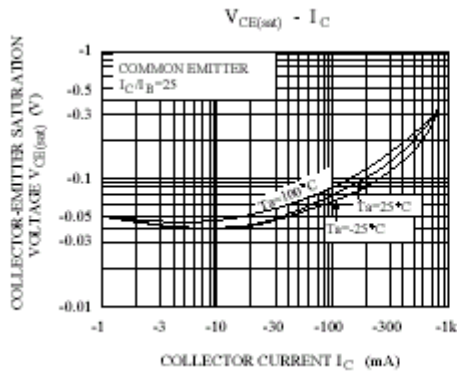
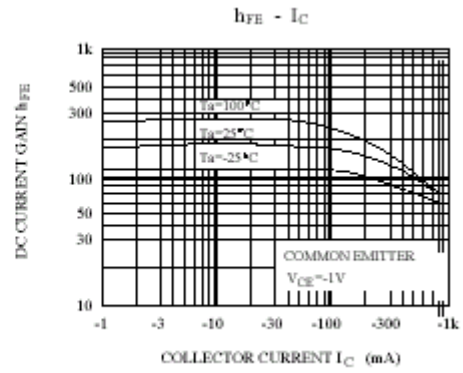
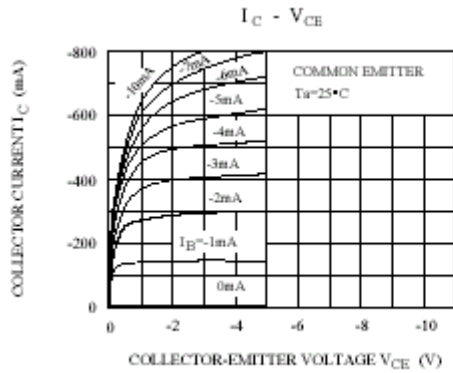
| Parameter  | Symbol         | Min.     | Typ. | Max. | Unit |   |
|--|----------------|----------|------|------|------|---|
| DC Current Gain<br>at $-V_{CE} = 1\text{ V}$ , $-I_C = 100\text{ mA}$ Current Gain Group<br>at $-V_{CE} = 1\text{ V}$ , $-I_C = 700\text{ mA}$ | O<br>Y         | $h_{FE}$ | 100  | -    | 200  | - |
|  |                | $h_{FE}$ | 160  | -    | 320  | - |
|  |                | $h_{FE}$ | 35   | -    | -    | - |
| Collector Cutoff Current<br>at $-V_{CB} = 35\text{ V}$   | $-I_{CBO}$     | -        | -    | 100  | nA   |   |
| Emitter Cutoff Current<br>at $-V_{EB} = 5\text{ V}$  | $-I_{EBO}$     | -        | -    | 100  | nA   |   |
| Collector Emitter Breakdown Voltage<br>at $-I_C = 10\text{ mA}$  | $-V_{(BR)CEO}$ | 30       | -    | -    | V    |   |
| Collector Emitter Saturation Voltage<br>at $-I_C = 500\text{ mA}$ , $-I_B = 20\text{ mA}$  | $-V_{CE(sat)}$ | -        | -    | 0.7  | V    |   |
| Base Emitter Voltage<br>at $-V_{CE} = 1\text{ V}$ , $-I_C = 10\text{ mA}$  | $-V_{BE}$      | 0.5      | -    | 0.8  | V    |   |
| Transition Frequency<br>at $-V_{CE} = 5\text{ V}$ , $-I_C = 10\text{ mA}$  | $f_T$          | -        | 120  | -    | MHz  |   |
| Collector Output Capacitance<br>at $-V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$  | $C_{ob}$       | -        | 19   | -    | pF   |   |



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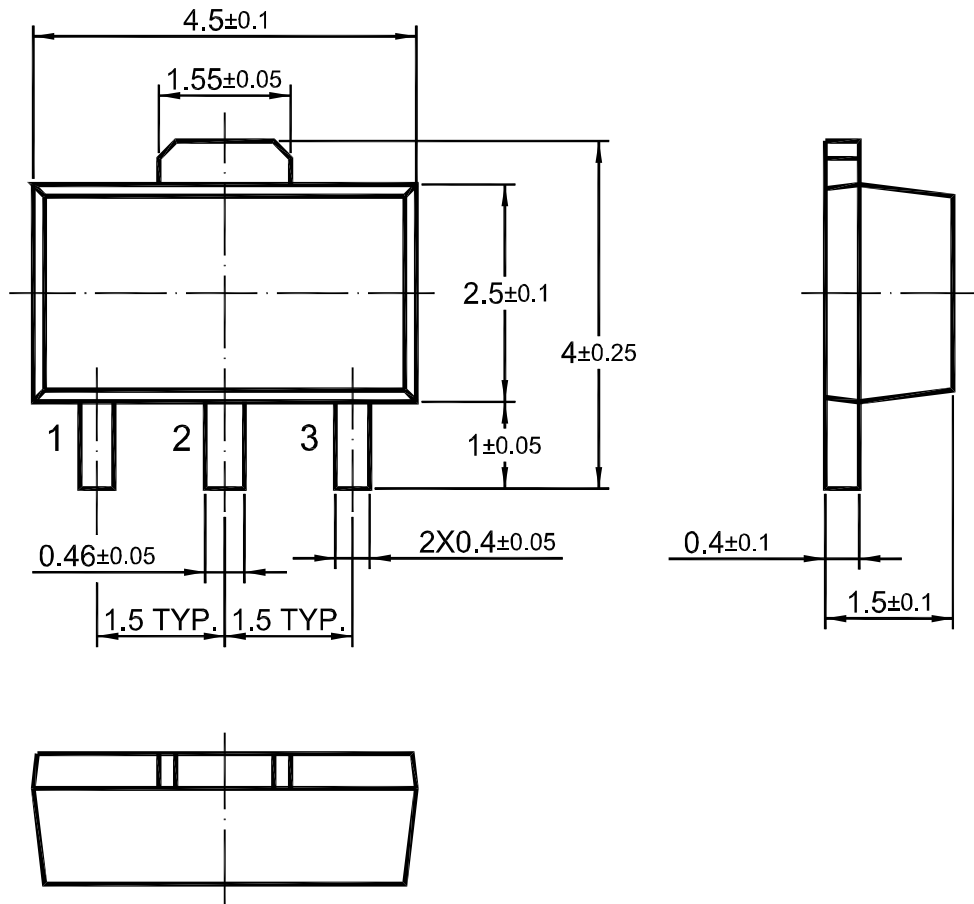
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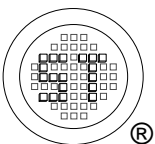
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# 2SA1664U

## SOT-89 PACKAGE OUTLINE



Dimensions in mm



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ISO 9001 : 2008  
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BS OHSAS 18001 : 2007  
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IECQ QC 080000  
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Dated: 20/01/2016 Rev: 02